CONTINGENCY PLAN, 90-DAY WASTE STORAGE AREA

BUILDING 510, PHYSICS DEPARTMENT

1. PURPOSE

The purpose of this document is to provide working guidelines for building personnel in the event of a spill, fire, or other emergency involving this waste storage area. Response plans for small-scale spills, fires, and medical emergencies are provided in Section 5. This plan is NOT intended as a substitute for emergency response training. Respond to emergencies, spills, or fires **ONLY** to your level of training.

2. NOTIFICATION

For all incidents that cannot be handled by the building personnel, the primary responsibility of the building personnel is to IMMEDIATELY call the emergency number (**x2222 or 911**) and contact the individuals listed in Table 1.

Table 1

EMERGENCY COORDINATORS
STORAGE AREA, BUILDING 510

Position	Name	Office Phone	Home Phone
Police Superior Officer	Emergency Number	2222 24 hr.	--
Fire Superior Officer	Emergency Number	2222 24 hr.	--
Storage Area Manager Alternate	Ron Gill Mike Zarcone	3987 5890	744-5285 246-5070
Facility Support Representative	Nate Foster	5496	252-8178
RCD FSS for Physics Department	Joe Vignola	3846 Pager: 6160	399-4596
ES&H Coordinator	Ron Gill Mike Zarcone	3987 5890	744-5285 246-5070
ORPS Occurrence Categorizer	--	631-433-0443	--

3. SITE DESCRIPTION

3.1 SITE MAP

Figure 1 is a site map of the 90-day waste storage area showing the location of waste, emergency/safety equipment, and exterior exits.

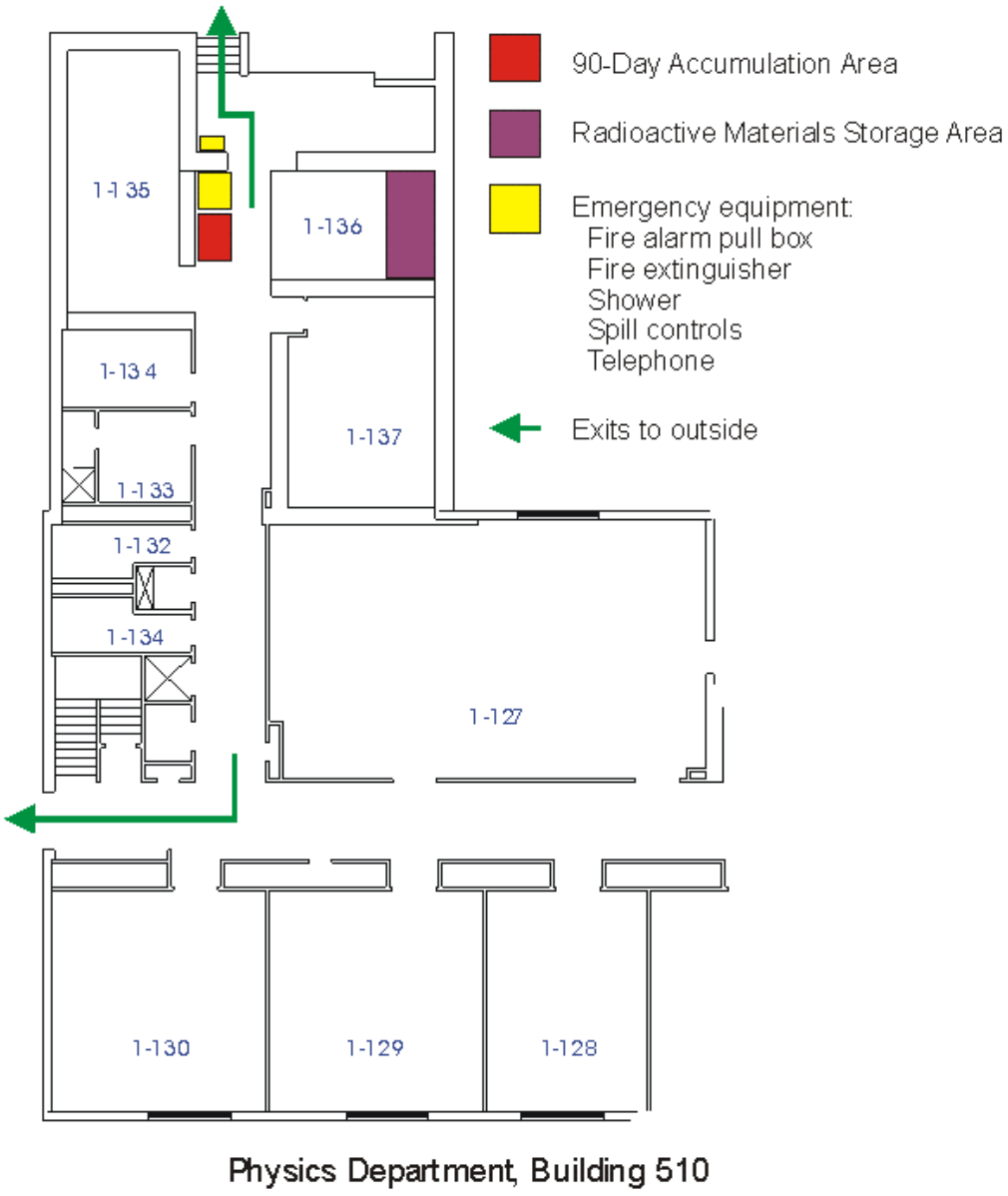

Figure 1. Building 510 90-Day Accumulation Area Site Map.

3.2 EMERGENCY/SAFETY EQUIPMENT

Emergency/safety equipment at this storage location, as shown in Figure 1, includes the items indicated below:

- ☐ ABC fire extinguisher

- ☒ Halon fire extinguisher
- ☐ Fire detection system
- ☒ Fire alarm pull box
- ☐ Sprinkler system, water or CO_2
- ☒ Shower
- ☐ Eyewash
- ☒ Absorbent material
- ☐ First aid kit
- ☐ Gloves
- ☐ Lab coats
- ☐ Eye and face protection

4. TYPES OF WASTES AND HAZARDS

4.1 WASTE TYPES

- Flammable liquids;
- Industrial wastes;
- Mercury and mercury-contaminated wastes; and
- Acids/Bases.

4.2 GENERAL HAZARDS

Personnel should read the Material Safety Data Sheet (MSDS) for any chemical product before handling or use. Regulations require that copies of the MSDS for a product containing hazardous components be made available to users.

Personal protective equipment (PPE) specified for a particular substance may be used by on-site personnel if they have been properly trained in its use.

The mixing of incompatible substances in the same container is forbidden. Containers holding incompatible materials must be physically segregated.

4.3 FLAMMABLE LIQUIDS

Flammable liquids may be readily ignited at ambient room temperatures. These compounds may generate substantial quantities of flammable vapors in air at ambient temperatures. If the vapor concentration in air exceeds a critical percentage, the vapors can be easily ignited. Ignition can be

caused by heat, friction, static electricity, or the operation of electrical switches/apparatus. Always ensure adequate ventilation to prevent the buildup of vapors and avoid contact with oxidizers.

Flammable solvents may be absorbed through and/or cause defatting of the skin. Absorption of solvents or inhalation of the vapors generated by them is harmful and may cause both short-term effects and permanent physical damage.

4.4 CORROSIVES - ACIDS/BASES

Acids and bases are strong tissue irritants. The effect of skin exposure can vary from dermatitis through complete destruction of tissues (i.e., chemical burns). The vapors of acids and bases can cause damage to soft body tissues such as the eyes and the respiratory tract. Corrosives can generate toxic vapors or gases by themselves (i.e., hydrochloric acid, ammonium hydroxide) and by reaction with other chemical substances (i.e., cyanides, sulfides). Some acids such as nitric and sulfuric are oxidizers as well as corrosives.

4.5 OXIDIZERS/REACTIVES - ACIDS

These materials react vigorously with other chemicals and may self decompose when heated. Personnel should become familiar with the MSDS specific to the material and handle accordingly.

4.6 MERCURY

Mercury is of concern for its environmental impact as well as the toxicity of its vapor, salts and other compounds. The physical properties of mercury make it troublesome to thoroughly clean up and monitoring equipment is needed to determine if the clean up has been successful. Mercury Spill Kits are available to begin the clean up and containment of the spill. **In case of a mercury spill, x2222 or 911 should always be called.**

5. EMERGENCY RESPONSE ACTION PLANS

5.1 SPILLS

5.1.1 General Procedural Requirements

- Never attempt to clean up any spill without first notifying the Storage Area Manager.
- Never perform any spill cleanup without at least one other person available to provide assistance. If no assistance is available call **x2222 or 911** even if the spill is small.
- Do not attempt to clean up any spill greater than the quantity recommended for the hazard category. Call **x2222 or 911** for assistance.
- When performing a spill cleanup, wear appropriate PPE consisting of eye protection, splash apron, and gloves. If the material requires the use of respiratory protection equipment, you cannot clean it up yourself regardless of the quantity of the spill. Call **x2222 or 911** for assistance.

- Do not allow any spilled material to contact the skin or eyes.
- Do NOT respond to any spills of an unknown type; treat unknowns as toxic materials. Call **x2222 or 911** for assistance.

5.1.2 Flammable Liquids

Local Response Maximum Recommended Quantity: 1 liter

Spill Cleanup

Flammable liquid spills always pose a high fire risk due to the vapors generated. Remove all sources of ignition prior to any cleanup. Use an inert absorbent material to clean up the spill. The use of rags or paper towels is not recommended. Place the cleanup-generated waste into a metal vapor-tight container and treat it as a hazardous waste. Notify the Storage Area Manager of any waste generated during the spill cleanup.

Protective Equipment

Goggles or face shield, lab coat, butyl or silver shield gloves. If an air-purifying respirator with organic vapor cartridges is required, **call x2222 or 911**: you cannot clean up the spill yourself.

5.1.3 Corrosives - Acids/Bases

Local Response Maximum Recommended Quantity: 2 liters

Spill Cleanup

Use an inert absorbent material to clean up the spill. Do not use rags or paper towels that may react with the spill. Place the cleanup-generated waste into a glass or plastic vapor-tight container and treat it as a hazardous waste. Notify the Storage Area Manager of any waste generated during spill cleanup. Neutralize the area with a wash of sodium carbonate for acids or weak acid solution (acetic or citric acids) for alkaline spills, if available.

Protective Equipment

Goggles or face shield, splash apron, neoprene or silver shield gloves. If an air-purifying respirator with acid mist cartridges is required, **call x2222 or 911**: you cannot clean up the spill yourself.

5.1.4 Oxidizers/Reactives - Acids

Local Response Maximum Recommended Quantity: 2 liters

Spill Cleanup

Use an inert absorbent material to clean up the spill. Do not use rags or paper towels that may react with the spill. Place the cleanup-generated waste into a glass or plastic vapor-tight container and treat it as a hazardous waste. Notify the Storage Area Manager of any waste generated during spill cleanup.

NOTE: Many oxidizer solutions (e.g., chromic acid) are also corrosive; check the guidelines for acids/bases prior to cleanup.

Protective Equipment

Goggles or face shield, splash apron, neoprene or silver shield gloves. If an air-purifying respirator with acid gas/organic vapor cartridges is required, **call x2222 or 911**: you cannot clean up the spill yourself.

5.1.5 Mercury

Local Response Maximum Recommended Quantity: none - report all spills

Spill Cleanup

Call x2222 or 911 for assistance. While waiting for the responders to arrive, begin to apply a Mercury Spill Kit as directed to prevent the mercury from entering the environment.

Protective Equipment

Goggles or face shield, lab coat, neoprene gloves.

5.2 FIRES

DO NOT attempt to fight fires of ANY size if you have not been trained in the use of the available extinguishing agents. A fire that is improperly handled will not extinguish and may increase in intensity

Immediately notify the Storage Area Manager, the Fire Superior Officer, and the Safety and Environmental Protection Representative in the event of a fire of any size.

Do not fight any fire where the base of the fire exceeds approximately 1 square foot or where additional flammable materials may be at immediate risk of ignition. Leave the area immediately.

5.2.1 Flammable Liquids

Do not use water to extinguish flammable liquid fires. Use only a dry chemical ABC or AB fire extinguisher for flammable liquid fires.

5.2.2 Corrosives - Acids/Bases

Acids and bases generally will not support a fire but may react with other materials involved in the fire, potentially increasing the risk of toxic decomposition products.

5.2.3 Oxidizers/Reactives - Acids

Oxidizers generally will not burn but will support the combustion of organic materials and some metals. Fires involving oxidizers will burn with greater than normal intensity. Do not attempt to fight fires involving oxidizers.

5.3 CHEMICAL CONTAMINATION EMERGENCIES

SEEK MEDICAL ASSISTANCE IMMEDIATELY

When an individual has been contaminated with hazardous materials, it is important to remove as much of the material from the person as quickly as possible. When assisting an individual contaminated with hazardous materials, use caution to prevent contaminating yourself with the hazardous material.

5.3.1 Eye Contact

If any hazardous material contacts the eyes, immediately flush the eyes with cold or lukewarm water, holding the eyes open to irrigate under the lids. Maintain the flush for at least 15 minutes. Seek medical attention.

5.3.2 Skin Contact

For hazardous material contact with the skin, remove any contaminated clothing and immediately flush the affected area with large volumes of water for at least 15 minutes. For all materials except bases, wash the area with soap and water. Seek medical attention.

5.4 EVACUATIONS

5.4.1 Local

If an evacuation from the building containing this storage area is required, leave the storage area immediately and notify personnel in adjacent rooms of the potential hazard. Leave the building using the exit routes indicated on the fire evacuation wall diagrams posted within the building.

5.4.2 Facility

Facility evacuation alarms and procedures, as documented in the BNL Emergency Response Plan, are as follows:

- Continuous sounding of the site sirens for 5 minutes: Proceed immediately to the building assembly area. Await instructions, which may include the nature of the emergency, the type, sequence, and routes for evacuation.

- Intermittent sounding of the site sirens for 5 minutes: Evacuate the site immediately. Car pools will convene in the usual manner unless otherwise noted.